

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A multipurpose packing machine for producing rigid packets of cigarettes and comprising:

an input portion (2), which comprises at least a first packing module (26) for forming groups (5) of cigarettes, for wrapping sheets of packing material (44) about the groups (5) of cigarettes to form packed groups (13) of cigarettes, and for wrapping at least inner blanks (28) about the packed groups (13) of cigarettes to form a succession of first packages (31) about the packed groups (13) of cigarettes and thus to produce a succession of first packets (30) of cigarettes; and

an output portion (3); ~~characterized in that the output portion (3) comprises~~ comprising at least a second packing module (33; 46; 53; 62; 70) similar to the first packing module (26) and for wrapping outer blanks (34; 48; 56; 63; 71) about the first packages (31) to form a succession of second packets (35; 49; 57) of cigarettes, each having a second package (37; 50; 58) housing at least one respective first packet (30) of cigarettes;

wherein in the output portion (3) each outer blank (34; 48; 56; 63; 71) is connected mechanically to the inner blank (28) so as that the second package (37; 50; 58) is inseparable from the first packet (30) of cigarettes;

wherein said first and said second packing module each comprise a respective input wheel and a respective output wheel having a first and a second axis respectively;

the input wheel and the output wheel rotating in steps about the respective first and second axis;

and the machine comprising a number of feed lines for respective blanks; the first packing module comprising a first transfer station connecting the respective input wheel to the respective output wheel, and a first said feed line for feeding a succession of first said blanks at least partly defining respective first packages.

2. (Canceled)

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3. (Currently Amended) A machine as claimed in Claim 2, wherein, in each said first and second packing module (~~26, 33; 26, 46; 26, 53; 26, 62; 26, 70~~), said first and second axis (~~20, 27; 40, 41~~) are crosswise to each other.

4. (Currently Amended) A machine as claimed in Claim 2, wherein, in each of said first and second packing module (~~26, 33; 26, 46; 26, 53; 26, 62; 26, 70~~), the first axis (~~20; 40~~) is a vertical axis, and the second axis (~~27; 41~~) is a horizontal axis.

5. (Canceled)

6. (Currently Amended) A machine as claimed in Claim 1 5, wherein the first packing module (~~26~~) comprises a second said feed line (~~29~~) for feeding a succession of second said blanks (~~28~~), each at least partly defining a ~~relative~~ said respective first package (~~31~~); the second feed line (~~29~~) feeding the second blanks (~~28~~) between the input wheel (~~19~~) and the output wheel (~~23~~) of the first packing module (~~26~~), at the first transfer station (~~24~~).

7. (Currently Amended) A machine as claimed in Claim 1 5, wherein the second packing module (~~33; 46; 53; 62; 70~~) comprises a second transfer station (~~42; 42a; 51; 64~~) connecting the ~~relative~~ respective input wheel (~~38~~) to the ~~relative~~ respective output wheel (~~39~~), and for transferring said first packets (~~30~~) from the input wheel (~~38~~) to the output wheel (~~39~~); and a third said feed line (~~43; 52; 61; 65; 72~~) for feeding a succession of third said blanks (~~34; 48; 56; 63; 71~~), each at least partly defining a ~~relative~~ respective said second package (~~37; 50; 58~~); the third feed line (~~43; 52; 61; 65; 72~~) feeding the third blanks (~~34; 48; 56; 63; 71~~) between the input wheel (~~38~~) and the output wheel (~~39~~) of the second packing module (~~33; 46; 53; 62; 70~~), at the second transfer station (~~42; 42a; 51; 64~~).

8. (Currently Amended) A machine as claimed in Claim 7, wherein said second transfer station (~~42; 42a; 64~~) is a station for successively transferring said first packets (~~30~~) and the ~~relative~~ respective third blanks (~~34; 56; 63; 71~~) to the output wheel (~~23; 39~~) of the second packing module (~~33; 53; 62; 70~~) to form a succession of said second packets (~~35; 57~~), each having a respective second package (~~37; 58~~) housing a respective first packet (~~30~~).

9. (Currently Amended) A machine as claimed in Claim 7, wherein said second transfer station (51) is a station for accumulating said first packets (30) into first groups (47), and for transferring said first groups (47) and the ~~relative~~ respective third blanks (48) to the output wheel (39) of the second packing module (46) to form a succession of said second packets (49), each having a respective second package (50) housing a respective first group (47).

10. (Currently Amended) A machine as claimed in Claim 7, wherein the second packing module (62) comprises, between the first transfer station (32) and the second transfer station (64), an accumulating station (51a; 51b) for combining with a first packet (30), advanced by the input wheel (38), at least one further first packet (30) previously unloaded off the input wheel (38) at said accumulating station (51a; 51b), and for forming a ~~relative~~ respective first group (47; 47a) of first packets (30).

11. (Currently Amended) A machine as claimed in Claim 7, wherein said second packing module (53) comprises a further feed line (60) connected to the input wheel (38) at a second input station (59) located upstream from the second transfer station (42); the further feed line (60) supplying the input wheel (38) with a succession of objects (54), and combining each object (54), at the second input station (59), with a ~~relative~~ respective first packet (30) to form a ~~relative~~ respective second group (55); and said second transfer station (42) being a station for successively transferring said second groups (55) and the ~~relative~~ respective third blanks (56) to the output wheel (39) of the second packing module (53) to form a succession of said second packets (57), each having a respective second package (58) housing a respective second group (55).

12. (Currently Amended) A machine as claimed in Claim 11, wherein each said object (54) is a packet similar or identical to the ~~relative~~ respective first packet (30).

13. (Canceled)

14. (Currently Amended) A machine as claimed in Claims ~~1~~ 5, wherein said second packing module (~~33; 46; 53; 62; 70~~) comprises an auxiliary output wheel (45) located downstream from the ~~relative~~ respective output wheel (39); the auxiliary output wheel (45) being a wheel for turning the second packets (~~35; 49; 57~~) over through 180°.

15. (Currently Amended) A machine as claimed in Claim 14, wherein the second packing module (~~33; 46; 53; 62; 70~~) comprises a fourth feed line (66) for a succession of fourth blanks (67); the fourth feed line (66) feeding the fourth blanks (67) between the output wheel (39) and the auxiliary output wheel (45) of the second packing module (~~33; 46; 53; 62; 70~~) to pack the second packets (~~35; 49; 57~~).

16. (Currently Amended) A machine as claimed in Claims 7, and comprising at least two said second packing modules (~~33; 46; 53; 62; 70~~) in series; each said second packing module (~~33; 46; 53; 62; 70~~) comprising a respective third feed line (~~43; 52; 61; 65; 72~~) for a respective succession of said third blanks (~~34; 48; 56; 63; 71~~).

17. (Currently Amended) A machine as claimed in Claims 7, wherein the second feed line (29) feeds the second blanks (28) to the first transfer station (24) in a first direction (68), and the third feed line (~~43; 52; 61; 65~~) feeds the ~~relative~~ respective third blanks (~~34; 48; 56; 63~~) to the ~~relative~~ respective second transfer station (~~42; 42a; 51; 64~~) in a second direction (69); said first and said second direction (~~68; 69~~) being crosswise to each other.

18. (Currently Amended) A machine as claimed in Claim 17, wherein said first direction (68) is parallel to the second axes (~~27; 41~~), and said second direction (69) is crosswise to the second axes (~~27; 41~~).

19. (Currently Amended) A machine as claimed in Claims ~~1~~ 5, wherein the input wheel (~~38~~) of the second packing module (~~33; 46; 53; 62~~) has an outer periphery designed to support the ~~relative~~ respective packed groups (~~13~~) positioned flat and with their respective longitudinal axes substantially tangent to the outer periphery and crosswise to the ~~relative~~ respective first axis (~~40~~).

20. (Currently Amended) A machine as claimed in Claim 19, wherein the output wheel (39) of the second packing module (33; 46; 53) has an outer periphery designed to support the relative respective packed groups (13) positioned on edge and with their respective longitudinal axes parallel to the relative respective second axis (41).

21. (Currently Amended) A machine as claimed in Claim 20, wherein the output wheel (39) of the second packing module (62; 70) has an outer periphery designed to support the relative respective packed groups (13) positioned flat and with their respective longitudinal axes parallel to the relative respective second axis (41).

22. (Currently Amended) A machine as claimed in Claims 7, wherein the second feed line (29) feeds the second blanks (28) to the first transfer station (24) in a first direction (68), and the third feed line (72) feeds the relative respective third blanks (71) to the relative respective second transfer station (42a) in a second direction (73); said first and said second direction (68; 73) being parallel to each other and to the second axes (27; 41).

23. (Currently Amended) A machine as claimed in Claim 22, wherein, in each packing module (26; 70), the input wheel (19; 38a) has an outer periphery designed to support the relative respective packed groups (13) positioned on edge and with their respective longitudinal axes substantially tangent to the outer periphery of the input wheel (19; 38a) and crosswise to the relative respective first axis (20; 40a); and the output wheel (23; 39) has an outer periphery designed to support the relative respective packed groups (13) positioned flat and with their respective longitudinal axes parallel to the relative respective second axis (27; 41a).

24. (New) A machine as claimed in Claim 1, wherein the first feed line is connected to the input wheel of the first packing module at a first input station located upstream from the first transfer station.